REMARKS/ARGUMENTS

This is in response to the Office Action dated November 1, 2005. In view of the foregoing, claim 7 has been amended and claims 8-19 have been added. No new matter is being presented, and reconsideration and further examination of claims 1-19 are respectfully requested.

CLAIM REJECTION UNDER 35 U.S.C. §103

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yonge, III et al. (U.S. Patent Number 6,671,284) in view of Johnson et al. (Johnson et al., "On Suitable Codes for Frame Synchronization in Packet Radio LANs," 1994, IEEE). In view of the remarks set forth below, the outstanding obviousness rejections are respectfully traversed.

Claims 1-6 set forth a network comprising a plurality of subnetworks which can each be connected via bridge terminals and each includes a controller for controlling a subnetwork. The controller is provided for shifting the frame structure of its subnetwork to at least a frame structure of another subnetwork.

By way of review, Yonge relates to frame control for efficient media access using orthogonal frequency division multiplexing ("OFDM"). FIG. 32 illustrates a network 620 including first "reliable" subnetwork 622 and second "reliable" subnetwork 624. See col. 35, ln. 6-10. A third "noisy" subnetwork 626, such as power lines or wireless media, is interposed between subnetworks 622, 624. Bridges 628, 630 connect the subnetworks, and the bridges may include learning processes. Col. 35, ln. 25-32. FIG. 38 illustrates a contention-free intervals session 726 employed by a CSMA ("Carrier Sense Multiple Access") network (i.e. FIG. 1) to alternate between distributed media access control achieved during the contention free intervals 725 and centralized media access control (like TDMA) of the contention free intervals 722. Col. 42, ln. 12-18. An SA Frame size field 750 is used to set a Transmit Timer for measuring the time interval between the end of the previous transmission and the beginning of the transmission of the queued frame. Col. 42, ln. 41-54. When the Transmit Timer expires, a queued frame is transmitted ***as soon as the medium becomes idle.*** Id. (emphasis added). In order to provide bridging, a ***dummy frame*** is used to replace an actual frame to be delivered when that frame does

not arrive at the MAC in time for transmission. Col. 43, ln. 6-10. If the size of an ***individual frame*** does not meet the minimum requirement, the frame is padded with bits. Col. 43, ln. 15-18. If an ***individual frame*** exceeds the maximum requirement, the individual frame is truncated (or a dummy frame is sent) and a "fail" is indicated to the host. Col. 43, ln. 20-24. Frame synchronization is thus provided on a frame by frame basis. As set forth on page 2 of the Office Action dated November 1, 2005, Yonge fails to disclose shifting the frame structure of its subnetwork to at least a frame structure of another network.

The secondary reference to Johnson, p. 1423, section V, is relied upon as teaching shift of the claimed frame structure to that of another network. This assertion is respectfully traversed. By way of review, Johnson relates to problems with the wireless ***physical layer*** -- not the MAC layer. See p. 1421, INTRODUCTION paragraph. Johnson relies upon the well known Barker codes (length = 2, 3, 4, 5, 7, 11, 13) in the physical layer to provide auto-correlation functions ("ACFS") for a radio LAN ("local area network"). See p. 1421, col. 2. The side lobes of periodic and aperiodic ACFs are bounded by ±1. The effects of noise on periodic signals are less than on aperiodic signals (because one doesn't know the start time). See p. 1422, col. 1. Thus, for a transmission rate of 15M bit/s (a bit period of 67ns) the maximum rms delay spread is about 100 ns. See pg. 1423, section V. Because it is known that the exponential power ***decay*** for a delay spread of 100 ns is 10 dB after 230 ns, working backwards, it is found that for the given parameters 3 bits of ***low side-lobes*** is provided on either side of a peak. These added 3 bits ***are not*** "for synchronization purposes" as set forth on page 3 of the Office Action. Rather, for the transmission rate of 15M bit/s, 3 bit padding of ***low side-lobes*** is used to ensure proper signal ***recognition*** for the start of transmission of every packet. In other words, because the Johnson LAN is not periodic, ***each*** packet is padded with 3 bits to provide a low noise "cold start." There is no shift of any frame structure in Johnson. There is merely the addition of 3 "low side-lobe" bits on each side of the peak to enhance "cold start" packet communication. Moreover, because the packet propagation of Johnson is aperiodic, there is no frame structure.

Claim 7 also stands rejected over Yonge in view of Johnson. The Office Action at page 3 states that Yonge fails to teach displacing the frame structure of the network relative to at least

one frame structure of another network. Johnson is relied upon as teaching displacing of the frame structure of the network relative to at least one frame structure of another subnetwork. This assertion is respectfully traversed.

Claim 7 now particularly sets forth a controller in a first subnetwork and that the controller displaces the frame structure of the first subnetwork relative to at least one frame structure of another subnetwork. As set forth above, Johnson always provides 3 bit padding in the physical layer to enable continuous cold start aperiodic communication. The aperiodic Johnson packets are padded, frame structure is never displaced. Moreover, because the packet propagation of Johnson is aperiodic, there is no frame structure that can be displaced.

NEW CLAIMS 8-9

New claims 8-9 depend from claim 7, and particularly set forth that the first and second subnetworks are centralized subnetworks and that each subnetwork has an associated MAC frame structure. Claims 8-9 are allowable in view of the base claim subject matter of claim 7 set forth above. Approval and entry are respectfully requested.

NEW CLAIMS 10-19

New claims 10-19 include the subject matter of base claim 10. New independent claim 10 particularly sets forth that the first and second subnetworks are centralized subnetworks and that each subnetwork has an associated MAC frame structure. Further, claim 10 particularly sets forth that the first central controller shifts the first MAC frame structure to the second MAC frame structure. Claim 10 is linked to claim 7 by way of claims 8-9.

As set forth above with respect to claim 1, the applied art to Yonge fails to disclose shifting the frame structure of its subnetwork to at least a frame structure of another network. Johnson merely pads frame packets at the physical layer with 3 bits regardless of a second subnetwork frame structure. Therefore, neither reference teaches or suggests shifting a first MAC frame structure to a second MAC frame structure as claimed. Approval and entry of new claims 19-19 are respectfully requested.

CONCLUSION

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

While we believe that the instant amendment places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner telephone the undersigned attorney in order to expeditiously resolve any outstanding issues.

In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

Respectfully submitted,
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